

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Julian R. Cudmore, et al.

Attorney Docket No.: 102.0027

Serial No.:

Art Unit:

Filed:

Examiner:

For: **System and Method for Optimizing Production in an Artificially Lifted Well**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## CERTIFICATE OF MAILING

I hereby certify that this **Information Disclosure Statement with references** is being deposited with the United States Postal Service as Express Mail No. EV 335954434 US in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Rhonda J. Smith  
Rhonda J. Smith

February 3, 2004  
Date

Rhonda J. Smith  
Schlumberger Technology Corporation  
14910 Airline Road  
Rosharon, Texas 77583-1590

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	
		Filing Date	February 3, 2004
		First Named Inventor	Cudmore, Julian
		Art Unit	
		Examiner Name	
Sheet 1 of 3	Attorney Docket Number	102.0027	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. 1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US- 2003/0015320	01/23/2003	Crossley	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. 1	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

Examiner Signature	Date Considered
-----------------------	--------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	
		Filing Date	February 3, 2004
		First Named Inventor	Cudmore, Julian
		Group Art Unit	
		Examiner Name	
Sheet 2 of 3	Attorney Docket Number	102.0027	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
		R. STINSON, "The Use of Systems Analysis in the Design of a Gas-Lift System", SPE 17584, November 1, 1988, 6 pp., Tianjin, China	
		W.J.G.J DER KINDEREN, et al., "Real-Time Artificial Lift Optimization", SPE 49463, October 11, 1998, 10 pp., Abu Dhabi, U.A.E.	
		Y.C. CHIA, et al., "Gas Lift Optimization Efforts and Challenges", SPE 57313, October 25, 1999, 9 pp., Kuala Lumpur, Malaysia	
		M.L. LITVAK, et al., "Prudhoe Bay E-Field Production Optimization System Based on Integrated Reservoir and Facility Simulation", SPE 77843, September 29, 2002, 11 pp., San Antonio, Texas, U.S.A	
		P. WANG, et al., "Optimization of Production Operations in Petroleum Fields", SPE 77658, September 29, 2002, 12 pp., San Antonio, Texas, U.S.A	
		A.L. PODIO, et al., "Advances in Surface Measurements for Optimization of Artificial Lift Operations", SPE 77895, October 8, 2002, 11 pp., Melbourne, Australia	
		D. REEVES, et al., "Gas Lift Automation: Real Time Data to Desktop for Optimizing an Offshore GOM Platform", SPE 84166, October 5, 2003, 13 pp., Denver, Colorado, U.S.A	
		BIOCOMP SYSTEMS, INC., "IntelliDynamics Gas Lift", July 31, 2003, 2 pp. <i>Optimization</i>	
		EPRODUCTION SOLUTIONS, "Gas Lift Optimization Solution", January 30, 2004, 7 pp.	
		JPT ONLINE, "Gas Lift Automation: Real-Time Data to Desktop", November 2003, 4 pp.	
		WINGLUE, "Gas-Lift Surveillance Program", no date, 2pp.	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				Application Number	
				Filing Date	February 3, 2004
				First Named Inventor	Cudmore, Julian
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	102.0027
Sheet	3	of	3		

[illegible]

Examiner Signature	Date Considered
-----------------------	--------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.